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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/722,891	11/26/2003	David L. Thompson	P-10520.02	2874
27581	7590	04/18/2006	EXAMINER	
MEDTRONIC, INC. 710 MEDTRONIC PARK MINNEAPOLIS, MN 55432-9924			OROPEZA, FRANCES P	
			ART UNIT	PAPER NUMBER
			3766	

DATE MAILED: 04/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/722,891	<b>Applicant(s)</b> THOMPSON, DAVID L.	
	<b>Examiner</b> Frances P. Oropeza	<b>Art Unit</b> 3766	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 11/26/03 (Initial Filing).
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 May 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/14/05; 5/11/05</u> | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 4-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 4, line 8, "the modulation scheme" lacks antecedent basis.

It appears claim 13 is a Markush-type claim, but the claim is not in the proper format.

In claim 13 "includes RF, IrDA an ultrasound" should be removed and

--is selected from the group consisting of RF, IrDA an ultrasound--.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Silvian (US 5466246). Silvian discloses a programmer apparatus for communication with various types of implantable medical devices (IMDs) from various manufactures, the apparatus comprising a

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digital signal processor (DSP) (17), a means for receiving a data sing from any one of the IMDs (13), a means for modulating the signal (17), an antenna (23), a receiver (13), and a transmitter (15) (abstract; col. 1 @ 58 – col. 2 @ 16; col. 2 @ 53 – col. 3 @ 18; col. 3 @ 30-36; col. 4 @ 24-28; col. 5 @ 14-17).

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Silvian (US 5466246) in view of Weijand et al. (US 5999857). As discussed in paragraph 4 of this action, Silvian discloses the claimed invention except for the DSP including a means for conserving battery life.

Weijand et al. teach telemetry systems for implanted devices using for the DSP including a means for conserving battery life for the purpose of decreasing the energy drain on the power source. It would have been obvious to one having ordinary skill in the art at the time of the invention to have used a DSP that included a means for conserving battery life in the Silvian system in order to extend battery life and providing the added benefit of increased band width and greater data transfer rates (abstract; col. 1 @ 42-46; col. 2 @ 19-29, 32-56).

7. Claims 4-7, 11, 13 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Silvian (US 5466246) in view of Slepian (US 6802811).

As to claim 11, Silvian teaches a means for real-time tests (col. 5 @ 3-7) and a means for operating various modulations for different medical devices (col. 5 @ 14-17).

As to claim 13, Silvian teaches the use of electromagnetic radiation, read to include radio frequency (RF) and Infra-red (IrDA) communications (col. 2 @ 9-13).

As discussed in paragraph 4 of this action and in the two previous paragraphs, Silvian discloses the claimed invention except for:

- a remote monitor (claim 4),
- monitoring external devices in addition to internal devices (claim 5),
- the bi-directional communication with a hospital or clinic (claim 6),
- the antenna enabling far-field and near-field telemetry (claim 7),
- a means for signature evaluation (claim 11),
- the communication link being ultrasound (claim 13), and
- the communication link including the Internet via a transponder (claim 16).

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As to a remote monitor, Slepian teaches telemetry monitoring using a remote monitor, such as the Internet, for the purpose of connecting the patient to remote health care workers. It would have been obvious to one having ordinary skill in the art at the time of the invention to have used a remote monitor in the Silvian system in order to enable the physician or the nurse to monitor and interact remotely with the patient (col. 3 @ 1-9; col. 21-25).

As to monitoring external devices, Slepian teaches telemetry systems using external devices in the addition to the internal devices for the purpose of receiving and transmitting data signals from additional devices. It would have been obvious to one having ordinary skill in the art at the time of the invention to have used external devices in the modified Silvian system in order to increase the amount and type of data that is monitored so changes in the patient as reflected in the monitored parameters can be identified and patient care modified as needed in response to the data (col. 1 @ 9-15; col. 2 @ 52-62; col. 6 @ 49-51; col. 12 @ 25-27).

As to the bi-directional communication with a hospital or clinic, Slepian teaches telemetry systems using bi-directional communication with a hospital or clinic for the purpose of enabling remote communication between the patient and the health care professional. It would have been obvious to one having ordinary skill in the art at the time of the invention to have used the bi-directional communication with a hospital or clinic in the modified Silvian system in order to enable patient information to reach the health profession who can respond to the information to optimize the patient's care (col. 1 @ 9-15; col. 2 @ 52-62; col. 3 @ 1-9; col. 7 @ 21-25).

As to the antenna enabling far-field and near-field telemetry, Slepian teaches telemetry systems using the antenna to enable far-field and near-field telemetry for the purpose of communicating with local and distant locations. It would have been obvious to one having ordinary skill in the art at the time of the invention to have the antenna enable far-field and near-

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field telemetry in the modified Silvian system in order to have patient information reach health professionals locally and in remote locations, so data can be evaluated and the appropriate care provided (col. 1 @ 9-15; col. 2 @ 52-62; col. 3 @ 1-9; col. 7 @ 21-25).

As to a means for signature evaluation, Slepian teaches telemetry systems using a means for signature evaluation for the purpose of identifying the specific monitoring device. It would have been obvious to one having ordinary skill in the art at the time of the invention to have used a means for signature evaluation in the modified Silvian system in order to rapidly identify the device so data can be gather quickly enabling rapid bi-directional communication exchanges between the patient and the caregivers when changes in the patient's condition occur (col. 1 @ 9-15; col. 2 @ 52-62; col. 8 @ 4-13).

As to the communication link being ultrasound, Slepian teaches telemetry systems using ultrasound for the purpose of providing a means to establish a communication link. It would have been obvious to one having ordinary skill in the art at the time of the invention to have used ultrasound as the communication link in the modified Silvian system in order to utilize a proven means of linking communication enabling effective bi-directional communication between the patient and the caregivers (col. 1 @ 9-15; col. 2 @ 52-62; col. 6 @ 51-53).

As to the communication link including the Internet via a transponder, Slepian teaches telemetry systems using the Internet via a transponder for the purpose of establishing a remote communication link. It would have been obvious to one having ordinary skill in the art at the time of the invention to have used the Internet via a transponder as the communication link in the modified Silvian system in order to utilize a proven means of linking communication so rapid and effective bi-directional communication is provided between the patient and the caregivers (col. 1 @ 9-15; col. 2 @ 52-62; col. 3 @ 1-9; col. 8 @ 16-18).

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8. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Silvian (US 5466246) in view of Peterson et al. (US 6078837). As discussed in paragraphs 4 and 7 of this action, modified Silvian discloses the claimed invention except for a DSP chip fully static with low power modes.

Peterson et al. teach monitoring systems using a DSP chip (Texas Instrument TMS320 series) accepted to be fully static with low power modes for the purpose of controlling the signal processing function. It would have been obvious to one having ordinary skill in the art at the time of the invention to have used a DSP chip fully static with low power modes in the modified Silvian system in order to use a proven means of signal processing that optimally deals with energy usage and signal clarity so patient care is optimized (col. 7 @ 14-20; col. 8 @ 8-13).

9. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Silvian (US 5466246) in view of Weijand (US 6298271). As discussed in paragraphs 4, 7 and 8 of this action, modified Silvian discloses the claimed invention except for the antenna having a first and a second antenna disposed concentric and co-planar.

Weijand teaches telemetry systems using an antenna having a first and a second antenna disposed concentric and co-planar for the purpose of receiving and transmitting telemetry signals. It would have been obvious to one having ordinary skill in the art at the time of the invention to have used an antenna having a first and a second antenna disposed concentric and co-planar in the modified Silvian system in order to provide an antenna with superior communication performance, when compared to a single coil, and to enable a smaller programming head, hence creating a more portable programming device (abstract; col. 4 @ 11-14).

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10. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Silvian (US 5466246) in view of Mann (US 5948006). As discussed in paragraph 4 and 7 of this action, modified Silvian discloses the claimed invention except for the programmer being a patch.

Mann teaches transcutaneous transmission using a patch for the purpose of transferring power to the implant and data between the implant and the programmer. It would have been obvious to one having ordinary skill in the art at the time of the invention to have used a programmer in the form of a patch in the modified Silvian system in order to provide a thin, light weight programmer that attaches to the skin, that can be located close to the implanted device to provide strong signal coupling, and that can be easily removed, disposed of and replaced (abstract; col. 2 @ 59-62; col. 3 @ 7-14, 29-31).

11. Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Silvian (US 5466246) in view of Weijand et al. (US 5999857). As discussed in paragraphs 4 and 7 of this action, modified Silvian discloses the claimed invention except for the DSP including a means for reducing power requirements (claim 14), and battery recharge input (claim 15).

As to reduced power requirements, Weijand et al. teach telemetry systems for implanted devices using for the DSP including a means for conserving battery life for the purpose of decreasing the energy drain on the battery. It would have been obvious to one having ordinary skill in the art at the time of the invention to have used a DSP that included a means for conserving battery life in the modified Silvian system in order to extend battery life and providing the added benefit of increased band width and greater data transfer rates (abstract; col. 1 @ 42-46; col. 2 @ 19-29, 32-56).

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As to recharge input, Weijand et al. teach telemetry systems using recharge input for the purpose providing energy to the capacitors and battery of the implanted device. It would have been obvious to one having ordinary skill in the art at the time of the invention to have used recharge input in the modified Silvian system in order to extend the effective life of the implanted device by transferring energy so the device has power for routine operations (col. 2 @ 32-38, 53-60; col. 6 @ 60-62; col. 12 @ 41-46).

### *Specification*

12. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: In claim 11, “real-time test” and “various Rx/demodulation” are not found in the specification. In claim 16, “transponder” is not found in the specification.

### *Claims Objections*

13. Claim 4 is objected to because of the following informalities: In claim 4, line 7, it appears “and” should be --the--. Appropriate correction is required.

### *Other Prior Art Cited*

14. The prior art made of record and not relied upon is considered pertinent to the Applicant's disclosure. US 5383915 to Adams teaches RF, IrDA and ultrasound communication links (col. 3 @ 16).

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*Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fran Oropeza whose telephone number is (571) 272-4953. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert E. Pezzuto can be reached on (571) 272-6996. The fax phone numbers for the organization where this application or proceeding is assigned is (571) 273-8300 for regular communication and for After Final communications.

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